

# THE RAMTOP

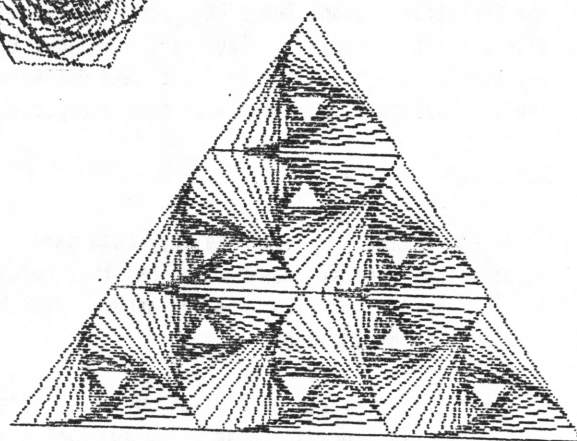
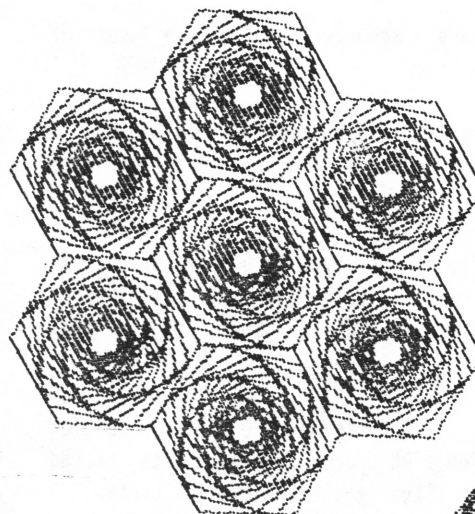
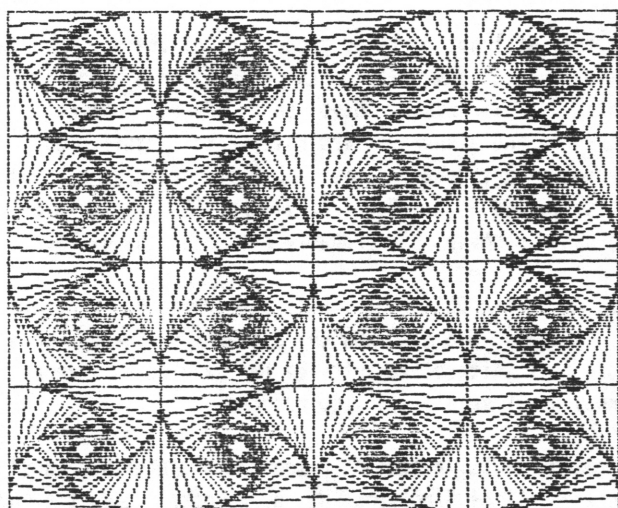
JUNE

1986

PUBLISHED BY THE  
GREATER CLEVELAND SINCLAIR USERS GROUP

IBM GRAPHICS

SEE INSIDE



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WEST SIDE GROUP MEETS AT LAKEWOOD PUBLIC LIBRARY  
15425 DETROIT AVE. LAKEWOOD OHIO 7:00 P.M.  
EVERY THIRD FRIDAY EACH MONTH  
CONTACT: DICK SIEG (216) 433-4387

EAST SIDE GROUP MEETS AT THE EUCLID SQUARE MALL  
IN THE EUCLIDIAN ROOM 7:30 P.M.  
EVERY FIRST FRIDAY EACH MONTH  
CONTACT: MAX SCHOENFELD (216) 371-1096

*Please note that the JULY  
East side meeting will be  
on the SECOND friday!*

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A short note to our friends from other newsletters and magazines. You are welcome to use any of our material, news, ads, or programs if YOU: (1) Tell where it came from (RAMTOP Cleveland, Ohio) and (2) The author's name that wrote the article. We would appreciate it if you would send us a copy of the newsletter that it appeared in! Unless otherwise notified we will do the same.

THANK YOU FOR YOUR INTEREST IN OUR NEWSLETTER !

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THE TSU BBS IS ALIVE AND GETTING BETTER! NEW PARAMETERS: 7/1/0  
PHONE: 216-327-1099 SYSOP: CHRIS RAYNAK NOW BIGGER AND BETTER!!!

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## T/S RESOURCES

news/rumors		
hardware	software	literature
June 1986		by Andy Kosiorek

AMSTRAD's "SINCLAIR" Plans-- Reports from the June Issue of Sinclair User:

Amstrad's first moves will be to rebuild confidence in the Sinclair machines as the top selling home micro in the U.K.

Existing stocks of the rubber keyed 16 & 48K Spectrums, and the QL's have been sold off to a overseas distributor. Amstrad will sell the Spectrum Plus for about \$100, and the Spectrum 128 for \$140.

Modified versions of these units may be introduced for the Christmas season. The 128K Speccy is expected to fitted with a built in cassette player and twin joystick ports. New accessories may be a 3" disk drive, and dot matrix printer. The microdrives have essentially been dropped from the line.

The Super-Spectrum!

In early 1987 the super- speccy, code named "Loki" will be marketed. Sinclair was working on this project at the time of the Amstrad sale. The new machine will have features similar to the Commodore Amiga.

The "Loki" will use a Z80H, an up-rated version of the Z80A. This new processor runs twice as fast, at 7MHz. At this speed there is time to provide a fast interrupt handler that keeps pace with the video display, and still leave time to run programs faster then the existing models. Two new custom chips will have direct access to the memory, enabling large amounts of screen data to be moved about at speeds faster than the Z80 itself is capable.

The machine will have two 64K banks, each made up of two 256K bit chips. Bank switching will enable the CPU to access all the RAM. A 4 bit system will allow a total address space of 1 Mbyte.

This machine is to also have a keyboard suitable for fast typists, a basic similar to the QL's, (no keywords), and CP/M operating system capabilities.

If you would like more information on the Supper-Spectrum, see Andy at the next meeting or refer to the June Sinclair User.

**PLEASE NOTE: THE JULY EAST SIDE MEETING WILL BE ON JULY 11 which is the SECOND Friday instead of the first due to July 4th.**

## T/S RESOURCES

news/rumors		
hardware	software	literature
June 1986		- continued

With all of the listed features for the Super-Spectrum, if you add a controller, and disk drive, the machine fits into the Amstrad CPC, and PCW line of computers, and may possibly run the same utilities.

Here in the US, the Amstrad word processor computers are slowly starting to appear at Sear's stores. These machines are equipped with a 3" disk drive.

THE QL:

Amstrad will not continue production of the QL. They have however indicated a willingness to sell the manufacturing rights. So far there have been several offers, but apparently the bidders offers have been insufficient. The interested parties are Timex, Digital Percision, Quanta, Eldersoft, and Helmut Stuver. If the QL is spun off, a disc-based machine will probably emerge on the market.

The rights to QL software were not owned by Sinclair, but by Tony Tebby, who designed the system's software. There are rumors that this software may be implemented on several new micros. A kit version is also rumored.

Here in the US, a company named "A+ Computer Response" has purchased all of Sinclairs US QL stocks, and set up a distributor ship system.

TIMEX IN MEXICO:

Timex of Portugal is importing their computer products into Mexico. The computer they are selling is called the TC 2048. It is similar to our 2068, except it has no cartridge port, and a spectrum backplane pinout. They are also marketing their 3" disk drive system, and a dot matrix printer.

Also there is a Timex Users Group in Mexico City that is interested in corresponding with users in the USA.

## The OLIGER disk system.

Hello to all! I have now joined the growing ranks of 2068ers with a disk system! I am the proud owner of the John Oliger expansion system with the "A" and "B" boards along with his Kempston joystick emulator. I got it all in kit form. It was a snap to build. It came with all the chips (in sockets) already placed on the boards in the correct places. All I had to do was solder the pins to the board. There were a few other components to put on the board. These are marked. I also added the NMI save button. This allows you to save whatever is in memory by simply hitting the button and selecting a sector on the disk to put it on. This works equally as well in the Spectrum mode without flipping any switches! This means that I can, and have, tranfered all my programs to disk with a very minimum of difficulty. All programs are saved in one shot since John's DOS save the entire state of the machine. Since this system requires NO memory from the 2068, ALL software is compatible with it.

I loaded this Tasword-Tasprint with a file in it, in less than 4 seconds! The time is the same for all programs. If I want to keep a copy of this letter, all I do is hit the button and push a number key (1-8) to save it on a formatted disk. Formatting takes about 58 seconds per disk since all tracks are written to and then verified. Saving and loading is a snap also. To save you may either use the NMI or as a direct command: SAVE /n (where n= the sector on the disk) or: SAVE /n: GOTO 1 to save the program and have it self start at line 1. Since the DOS saves the BASIC, all variables, user defined graphics and any machine code in the machine, you don't save in sections as you must on cassette and also with the other disk systems. Loading is just as easy. Since sector zero is reserved for a short directory program, you may use the command: LOAD ENTER to get the director. Then just touch a number key 1 - 8. You may also load with the dirrect command: LOAD /n .

This system also has many other features! One big one is that there is a print driver program built right into the DOS ROM so you may drive your lage printers with just LPRINT, LLIST and COPY! (YES I SAID COPY!) You may easily select your 2040 or the large printer with the command: LET /P=0 (AERCO or OLIGER interface) or: LET /P=1 for the 2040. You select your type of printer (for COPY) with the same command but with a letter added to tell his system what printer you are using such as the S6-10. The command is: LET /P=0/6 (for S6-10) There are several other letters that are in his manual. They cover all the popular printers.

To be completely honest I did have a couple of minor problems. They really weren't due to the disk system. First I found that there was a conflict with my printer interface. This was the problem with the interface NOT the disk system. This was easily solved by installing a switch to disable the READ line while you use the disk. This is no real inconvenience. It is also possible to add a gate chip that will disable it for you when the motor of the drive is on. I plan to add this latter. All in all, I feel that Oliger's disk system is at this time, the very best that you can get! I feel that for ease of getting your programs to disk, in either 2068 OR Spectrum, it simply can't be beat! To really butter the platter, his tech support is the best I have ever had from ANYONE!

The other problem was that my Pinball cartridge didn't work. All the other 5 cartridges I have DO work. I gave him a call and he told me how to add a simple switch to diable the "B" board so that it would not interfere with the opperation of the cartridge. He also within a day or two sent me a schematic to help me do this. It took all of 10 minites to do and it works great. I did find one (out of about 75) Spectrum program that would not load with the "B" board active. I simply switched it off, loaded the program, then switched it back on and used the NMI save to put it on disk. It loads and works fine!

I almost forgot to tell you about the Kempston joystick emulator board! It is quite nice to have if you have any Spectrum games! Almost every Spectrum game has the option to use the Kepston interface. This board as well as his other PC boards are very high quality. The board uses port 31 (IN) to read the joystick. It will work in 2068 mode also but there is no real advantage since there are already joystick ports in the 2068.

Well, I know that I have been rather long winded about this system, but I feel that when someone does the job that he has done for the Timex system, that it certainly deserves some recognition! (If it generates sales for him, that's fine too!) I will also say this, His products are very high in quality, very well thought out, and sell for a very reasonable price. They may be purchased assembled or in kit form. I have seen PC boards in very expensive equipment that were not as good in quality as Oliger's PC boards!

If you are interested in seeing this disk system in action, feel free to call me and stop over to my house! Caution! Be prepared to have the JLO Disk bug bite you! You may also write to John L. Oliger if you would like some information and prices of his products: The John Oliger Co., 11601 Whidbey Dr., Cumberland, IN, 46229.

James G. DuPuy

Please see the article I have on the "B" board switch and the Directory program. (in this issue)

Here is another Graphics program by Ted Knyszek.  
(from the front page)

```
5 REM CONVERTED FROM IBM TO
  TS-2068 By Ted Knyszek
10 DIM X(5): DIM Y(5): DIM T(5)
  ): DIM K(5)
20 LET SU=.12: LET RU=1-SU
30 FOR I=0 TO 3: FOR J=0 TO 3:
  IF INT ((1-2*INT ((I/2)))=INT ((J-2
+INT ((J/2))) THEN GO TO 50
40 LET Y(1)=43: LET Y(2)=0: LE
T Y(3)=0: LET Y(4)=43: GO TO 50
50 LET Y(1)=0: LET Y(2)=43: LE
```



```

T Y(3)=43: LET Y(4)=0
60 LET X(1)=1: LET X(2)=1: LET
X(3)=64: LET X(4)=64
70 FOR N=0 TO 18: LET X1=X(4)+
I+63: LET Y1=Y(4)+J+43
80 FOR M=1 TO 4: LET X2=X(M)+I
+63: LET Y2=Y(M)+J+43
90 PLOT X1,Y1: DRAW (X2-X1),(Y
2-Y1): LET X1=X2: LET Y1=Y2: LET
NJ=INT (M-4+INT (M/4))+1
100 LET T(M)=RU+X(M)+SU+X(NJ):
LET K(M)=RU+Y(M)+SU+Y(NJ): NEXT
M
110 FOR P=1 TO 4: LET X(P)=T(P)
: LET Y(P)=K(P): NEXT P: NEXT N:
NEXT J: NEXT I
120 PAUSE 300
130 CLS
210 LET SU=.1: LET RU=1-SU: LET
II=1: LET C=1
220 FOR J=0 TO 3: LET II=-II: L
ET JJ=1: FOR I=0 TO 4: LET JJ=-J
J: IF I<J OR I>4-J THEN GO TO 31
0
230 IF J<2 OR I>2 THEN LET C=(C
-INT (C/3)+3)+1
240 IF J=3 THEN LET C=(C-INT (C
/3)+3)+1
250 LET X(1)=0: LET X(2)=39: LE
T X(3)=78: LET Y(1)=0: LET Y(2)=
-48: LET Y(3)=0: IF II=JJ THEN L
ET Y(2)=48
260 FOR N=1 TO 11: LET X1=3+X(3
)+I+39: LET Y1=168-Y(3)-J+48+II+
JJ+24
270 FOR M=1 TO 3: LET X2=3+X(M)
+I+39: LET Y2=168-Y(M)-J+48+II+J
J+24: LET C=(C-INT (C/3)+3)+1
280 PLOT X1,Y1-30: DRAW (X2-X1)
,(Y2-30)-(Y1-30)): LET X1=X2: L
ET Y1=Y2: LET NJ=(M-INT (M/3)+3)
+1
290 LET T(M)=RU+X(M)+SU+X(NJ):
LET K(M)=RU+Y(M)+SU+Y(NJ): NEXT
M
300 FOR P=1 TO 3: LET X(P)=T(P)
: LET Y(P)=K(P): NEXT P: NEXT N
310 NEXT I: NEXT J
320 PAUSE 300
330 CLS
410 LET SU=.2: LET RU=1-SU
420 FOR J=0 TO 2: FOR I=0 TO 2:
IF J=0 AND I>1 THEN GO TO 510
430 LET E=0: IF I=1 THEN LET E=
31
440 LET X(1)=0: LET X(2)=25: LE
T X(3)=75: LET X(4)=100: LET X(5
)=75: LET X(6)=25
450 LET Y(1)=31: LET Y(2)=0: LE
T Y(3)=0: LET Y(4)=31: LET Y(5)=
62: LET Y(6)=62
460 FOR N=0 TO 20: LET X1=25+(X
(6)+I+75)+.8: LET Y1=(220-Y(6)-J
+62-E)+.9
470 FOR M=1 TO 6: LET X2=25+(X(
M)+I+75)+.8: LET Y2=(220-Y(M)-J+
62-E)+.9
480 PLOT X1,Y1: DRAW X2-X1,Y2-Y
1: LET X1=X2: LET Y1=Y2: LET NJ=
INT (M-5+INT (M/6))+1
490 LET T(M)=RU+X(M)+SU+X(NJ):
LET K(M)=RU+Y(M)+SU+Y(NJ): NEXT
M
500 FOR P=1 TO 6: LET X(P)=T(P)
: LET Y(P)=K(P): NEXT P: NEXT N
510 NEXT I: NEXT J
520 PAUSE 300
530 CLS
540 GO TO 10

```

One of our board members, John Velek, gave me a copy of the Timex survival column out of Computer Shopper. It was devoted to new products. I will give you a brief description of the two products for the 1000/ZX-81/1500. Both are software items. First is a neat software package that will allow you to use your serial or parallel printer interface with any full sized printer! Yes! Now you can plug a Tasman or Aerco (and others) interface from your 2068 into your 1000/ZX-81/1500, load in this 1/2K printer driver and you may LPRINT, LLIST, and COPY! (yes, COPY!) The name: UDP. This stands for Universal Printer Driver. It's available from E. Arthur Brown. This software also has some extra features. First, it has actually has three types of LPRINT. These are for upper and lower case characters and ASCII. One big feature is that it may be located anywhere in RAM, even in the 8K-16K block. It also has a SCROLL routine that is much better than the one in ROM. It also has a CHECKSUM routine that is very handy for checking yours SAVes and LOADs to be sure that they are correct. It can be merged to existing programs also.

There is also another very good software package out for the serious 1000/ZX-81/1500 programmer- DELPHIC tool kit. It gives you some mighty nice commands that will be a great aid to you when developing software. It takes 4K of RAM but it can be put anywhere including the 8K-16K block. I will list the new commands:

- 1- RENUMBER: Renumbers all your lines. Also renumbers all noncomputed GOTOs and GOSUBs.
- 2- COPY: Similar to Renumber, but copies a specified block of BASIC and adjusts the line numbers accordingly.
- 3- MOVE: Same as Copy but erases the original.
- 4- SEARCH: This will find all occurrences of a specified string.
- 5- DELETE: Used to delete a block of lines like the 2068.
- 6- REM Kill: Kills all the REM statements.
- 7- REM Generate: Great for creating a REM statement to store machine code in!
- 8- VARIABLES Print: Will print a list of all variables and there current values. They are all identified whether they are string, number, FOR-NEXT, and Arrays. They also have the variable name and dimensions.
- 9- HEX-DEC: Toggle between HEX and DEC.
- 10- FREE SPACE: Normally gives you the free ram left.
- 11- PROGRAM SIZE: Gives you the amount of memory used in a specified block of BASIC.
- 12- NON VOLATILE: For use with the Hunter board.
- 13- MERGE: Allows you to merge one or more programs.
- 14- TAPE INDEX: Reads the program names off your tape.
- 15- UNLOCK: Allows you to load a program and NOT self start.
- 16- QUIT: Allows you to go back to BASIC.

You access these functions with a single USR call that then prints the tool kit menu to the screen. Prompts are provided when inputs are required. This software is available on cassette or EPROM. If you want more detailed information, get a copy of Computer Shopper (JUNE) or E. Arthur Brown's paper.



## CRACKER JACK

## THIRD AND FINAL INSTALLMENT

Last month, we examined unstoppable and unmergeable programs. This month, I'll discuss headerless files, and some of the copier utilities.

## HEADERLESS FILES

In an effort to stop program piracy, many different schemes have been developed to slow down copying of programs. The use of headerless files is one of the most common. A headerless file is a tape file that isn't preceded by the usual short header burst telling the computer where and how the following program is to be loaded. Instead, the programmer has incorporated a short machine language routine in his program to set up the microprocessor registers as if a header had already been read by the computer. The ROM routine to load a tape is then called, and the bytes read into the computer. In many instances, it is fairly simple to break into these programs. One note; the use of headerless files is restricted almost exclusively to the Spectrum. I know of only one 2068 program that uses headerless files, and that is the number list in MTERM II!

To load a headerless file, you'll need to find out at least two things; the length of the file you want to load, and the address where it is to be loaded. You will also probably have to find out the address at which the program starts provided it is a machine code program. This isn't as difficult as it sounds. You will need a disassembler and the techniques that you have already learned from the previous Cracker Jack articles. The routine to load a headerless file is run from a machine code program. You will have to find the starting address of this program. When you have found it, run the disassembler on the program. Chances are, the program will be quite short. Here is a sample headerless loader program.

```
LD A,255      ;Prepare to load data
LD DE,6912    ;6912 bytes long, at
LD IX,16384   ;16384 in memory.
SCF           ;This is a SCREEN$.
CALL 1366     ;Call the ROM load
              ;routine.

LD A,255      ;Prepare to load data
LD DE,40640   ;40640 bytes long, at
LD IX,23808   ;23808.
SCF
CALL 1366     ;Call the ROM load
              ;routine.
```

As you can probably see, the program is pretty straight forward. This is the loader program from Devil's Crown. Two sections of code are loaded; first the SCREEN\$ and then the main program. Finally a jump to 52342 is made. This is like a RANDOMIZE USR 52342 statement from BASIC. To convert the headerless files into regular headered files you could just put a new header in front of the files. The DE register holds the length of the file, the IX holds the address to load the program into. The LD A,255 and SCF instructions are just there to signal the ROM loader routine to expect to load a block of code, not a header. Many programs use a similar technique to load headerless files.

## COPIER UTILITIES

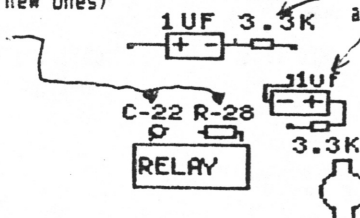
It takes a number of cracking techniques to copy the wide range of software on the market. No one technique can copy them all, and you can spend a large amount of time trying to copy a program. Some programs are just so difficult to break that they're hardly worth the effort if you have to do it all yourself. Fortunately, there are copier utility programs that can simplify the task of making copies.

For a good general purpose copier, Filecopy 3 is hard to beat. It can handle headerless files but the headerless file load mode must be selected manually. For copying multiple programs, Filecopy 3 can load and save many short files. I have had as many as fourteen files in the computer at the same time with no ill effect. One other strong point of Filecopy 3 is that it does do error checking when loading regular files.

For special problems, the 007 series of copiers is good. Among the types of programs 007 copiers can copy are pulsed loaders and high speed loaders. It can also handle the loading of several headerless files automatically. There is a 007 copier for each type of problem loader. The 007 copiers are a little more difficult to use, but they do work well.

Finally, there are the ultimate copiers, Non Maskable Interrupt (NMI) type copiers. They work by stopping the CPU dead in its tracks, allowing a separate ROM to be switched on. This ROM contains a routine or routines for copying the program in the computer at the time of the interrupt. While the NMI copier is the easiest and fastest type of copier to use, I feel that some of the fun, challenge, and learning experience of copying programs is gone. The choice of copiers is yours. I hope that you will have been helped by this series.

\*\* JACK \*\*



# IMPORTANT ANNOUNCEMENT!

I now have our group's records on disk and am able to access them quickly and easily. In going through them I was shocked to find that so many of our members are way past due on their dues! As of this printing we will NO LONGER get our printing done by Al Gedris. He has very kindly been getting the RAMTOPs copied for free. As most of you know, last year our treasury was almost broke! I am happy to say that we are doing much better now! BUT we will once again be in this position if we don't keep up our dues!

We have kept records for quite some time and if any of you are in doubt as to when your dues are due, feel free to call me. I can pull your record in less than 30 seconds. Also, you may not be aware that since about 9/85 when you pay your dues, I update you forward from your last due date. This means that if you are due in June but don't pay until August, you are updated from June.

At the present time, we have 103 newsletters being mailed. Out of these, 15 are free due to being an exchange with another group. As of right now, 16 of you are PAST due. I won't put your names in the newsletter since all you need to do is LOOK AT YOUR MAILING LABEL TO SEE WHEN YOU ARE DUE! (86/05/01) means May 1, 1986. THIS IS THE LAST MONTH THAT PAST DUES WILL BE SENT OUT! In the future, you will have a 1 month grace period. We want ALL of you to stick with our group and we value each and every one of you but we simply can't expect 82% (excluding the exchanges) to carry the group. It would cause us to have to increase the dues once again and I know that I for one, don't want that to happen! I will publish those of you due this month and next month just as a reminder. Please remember that we all need to pitch in and keep this fine group going and this is now and always has been, those on the Board also!

Printing costs are very high! If anyone in the group knows of a place we can get it done CHEAP please contact me! (661-4105) **THANKS FOR YOUR SUPPORT!**

Cosari, Helen	86/06/01
Hayes, Walter	86/06/01
Poland, John	86/06/01
Raynak, Christopher	86/06/01
Sieg, Dick	86/06/01
Simon, Thomas	86/06/01
Walker, William	86/06/01
Greenfield, Mike	86/06/01
Trenbick, Joe	86/06/01
Schaffer, Bruce	86/06/03
Wilson, Gene	86/06/06
Spero, Al	86/06/06
Banasik, Paul	86/06/17
Zeen Graphics (Dave)	86/07/01
Jenkins, Joe	86/07/01

## ANNOUNCEMENT:

Our club treasurer, Bob Parish will provide a HOST BBS for club members only. Hours of operation will be limited to: 6PM till he pulls the plug. (goes to bed) Sat. ONLY. Phone: 671-6922 Password: TIMEX, Parameters: 8-N-1 You must be able to send a CONTROL C & CONTROL Q to use the system. (continue or quit) This is done on the 2068 with MTERM by using CAP SHIFT then the "7" key followed by the character. (C or Q in this case)

## June Editorial

I got a letter from the TAS BAM users group PO BOX 644, Safety Harbor, FL., 33572. They have a version of PRO/FILE for the RoTronics Wafa Drive. It has a lot of added features over the cassette version. If you are interested and want more information, I will tell you about it on the phone or you can write to them.

I know that several of you have QLs now. I got a letter from: Mr. Derrick Hall, 381 Autumn Ave., Brooklyn, NY, 11208 Phone: 718-235-3169. He has quite a few products for the QL as well as 2 QLs for sale. Call me for details. (661-4105) His prices seem to be pretty low.

Please read the article about dues. I know that it is a well worn and not a fun subject, but without dues, will go under rather quickly! We plan to be around for a LONG time so don't get the idea that we are going bye bye any time soon! Most all of us in this group are real die hards! I know after putting a disk drive and so forth on mine, it's going to be a LONG time before I will even THINK of going into another computer!

Enough said! Have a fantastic month and a great summer!



If you would like to subscribe to the RAMTOP please fill out this form and send it to the listed address along with a check for: \$15/Year or \$7.50/ 6 mo. to become a member of our Group (Attend meetings, use library tapes Ect.) or: \$12/Year or \$6/ 6 months to receive the RAMTOP only. Please make checks payable to the RAMTOP! (The phone # is only for our records!)

\*\*\*\*\*  
\*Please print! Enclosed: \$\_\_\_\_\_ for 1 year\_\_ / 6 months\_\_\*

\*NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_\*

\*STREET: \_\_\_\_\_\*

\*CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_\*

\*Type of computer(s) and peripheral(s) you own: \_\_\_\_\_\*

\* *THANK YOU for your interest!* Please send to:  
\*Robert Parish, 12706 Leeila Ave., Cleveland, OH 44135  
\*\*\*\*\*

Next month, I will have an article and review from Dave Hoshon and I have a Directory program for the Oliger Disk system and, of course, lots of news and MORE!!!

8

From:  
THE GREATER CLEVELAND STEELERS USERS GROUP  
James G. DuPuy (Editor)  
6514 Bradley Ave. (Down)  
Parma, Ohio 44129

TO:

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4568 Williamston Ave.  
Brooklyn, OH  
44144

87/05/16

FIRST CLASS MAIL